Wisconsin Department of Transportation

Division of Transportation Infrastructure Development
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July, 1998

To: Specification Users

Subject: **1998 Supplemental Specifications amending the 1996 Standard Specifications for Highway and Structure Construction**

From: Jerry Zogg - Chief Standards Development Engineer
Bureau of Highway Construction

We are sending one copy of this publication for your use. There is no charge.

It will become effective for all contracts in the letting of October 13, 1998 and thereafter until amended. All the previously issued supplemental specifications and interim supplemental specifications will no longer be in effect after October 12, 1998 unless referenced in previously let contracts.

Eligible engineering consulting firms shall be responsible for obtaining sufficient copies of this document to enable their personnel to fulfill their responsibilities under a contract with the Department for engineering services.

Prequalified contractors shall be responsible for obtaining sufficient copies of this document for their bidding and contract management purposes. They also shall be responsible for notifying their subcontractors and suppliers about this document.

Additional free copies can be obtained in accordance with the instructions printed on the inside of the front cover.

The 1998 Supplemental Specifications incorporate the 1997 Supplemental Specifications and Interim Supplemental Specification No. 1 to the 1997 Supplemental Specifications. In addition, there are other changes which are explained below:

1. **Subsection 104.6.1 General** Paragraph ten is added at the end of this Subsection to clarify that flagging is considered incidental to the items of work in the contract.

Designers will not need to include Standard Special Provision 643-015 or other special provisions stating that flagging is incidental.

2. **Subsection 107.22 Contractor's Responsibility for Utility Property and Services** This Subsection is revised to include reference to the requirements of Administrative Rule, TRANS 220.

3. **Subsection 108.8 Liquidated Damages** The table is revised to reflect the results of the 1997 survey of the actual daily costs incurred by WisDOT for administrative and inspection personnel on construction projects.

4. **Subsection 109.1.1 General** Paragraph one is revised to allow measurement of a project in either U.S. Standard or S.I. units depending upon which system of units was used to develop the plans and schedule of prices. This change, and a similar change to Subsection 109.2, will eliminate the need for Standard Special Provision 109-010M. The balance of this Subsection was previously revised in an earlier Supplemental Specification.

5. **Subsection 109.2 Scope of Payment** This Subsection is amended to allow payment of a project in either U.S. Standard or S.I. units depending upon which system of units was used to develop the plans and schedule of prices. This change, and a similar change to Subsection 109.1.1, will eliminate the need for Standard Special Provision 109-010M.

6. **Subsection 205.3.1 Preparing Roadway Foundation** This Subsection has been revised to clarify Department policy on the excavation of and payment for undesirable foundation material. Suitable topsoil from within the limits of the assumed one to one slopes in the embankment areas must be removed first as Savaged Topsoil, to the extent necessary. Additional unstable topsoil material from within the limits of the assumed one to one slopes in the embankment areas should be removed as Excavation Below Subgrade. The description of the procedure for substitution of Salvaged Topsoil for contract quantities of Topsoil to be furnished by the contractor from sources outside the right of way has been moved to paragraph five of Subsection 625.3.2 "Processing Topsoil or Salvaged Topsoil".

7. **Subsection 304.2.3.2 Salvaged Asphaltic Pavement, Base Course** This Subsection is revised to clarify that all salvaged asphaltic pavement material that is to be used as base course must be processed to remove the larger sized particles. This change is a modification of an earlier Supplemental Specification.

8. **Subsection 401.3.4 Asphalt, Type AC** This change is a modification of an earlier Supplemental Specification that included a table of requirements for performance graded asphalt cements that was published in the Department's "Certification Method of Acceptance for Asphalt Cements". The text that had been previously added has been deleted and replaced with new language. This Subsection is revised to refer to the most recent version of that document so that any changes made as a part of an annual review

will automatically be included in the Standard Specifications.

9. **Subsection 402.2 Materials** This Subsection is revised to allow the use of a new class of emulsified asphalts, "Modified".

10. **Subsection 403.3.3.1 Required Tests for a Contract of 4600 Megagrams of Mixture or Greater** This Subsection has been revised to provide for alternate testing methods as approved by the engineer and to shorten the required retention period for split samples as approved by the engineer.

11. **Subsection 405.3.4 Tack Coat** This Subsection has been revised to eliminate multiple references to section 402. The specifications for tack coat material and application rates are included in section 402. Procedure 14-10-10 of the Facilities Development Manual will be updated to clarify that tack coat is required, under this Subsection, between all layers of new asphaltic base and pavement.

12. **Subsection 407.2.2.1.2 General Requirements** A performance based limit on the angularity of the fine aggregate fraction of the composite aggregate blend used in HV asphalt pavements replaces the previous method specification limit on the natural sand content.

13. **Subsection 407.3.2.1 Lower Layer** The Table of paragraph two of this Subsection contains an error in the units for the minimum stability value. The indicated minimums are in newtons, not kilonewtons as previously indicated.

14. **Subsection 407.3.2.2 Upper Layer** The Table of paragraph two of this Subsection contains an error in the units for the minimum stability value. The indicated minimums are in newtons, not kilonewtons as previously indicated.

15. **Subsection 407.3.3.1 Lower Layer** The Table of paragraph two of this Subsection contains an error in the units for the minimum stability value. The indicated minimums are in newtons, not kilonewtons as previously indicated.

16. **Subsection 407.3.3.2 Upper Layer** The Table of paragraph two of this Subsection contains an error in the units for the minimum stability value. The indicated minimums are in newtons, not kilonewtons as previously indicated.

17. **Subsection 416.1 Description** References to the provisions of 415.5.10 have been added for bid items for: Concrete Surface Drains, Concrete Headers, and Pavement Terminal Units to assure that the work will conform to the specified curing requirements for Concrete Pavement.

18. **Subsection 505.2.6 Dowel Bars and Tie Bars** This entire subsection has been removed and replaced to clarify changes made in a previous edition of the Supplemental Specifications. The text: "The coating applicator must have an Epoxy Coating Plant Certification by the Concrete Reinforcing Steel Institute.", previously added to 505.2.6 is

deleted from 505.2.6 and moved to 505.2.6.1 paragraph one for dowel bars. The same provision is included by the reference to 505.2.4 contained in paragraph one of subsection 505.2.6.2.2 for tie bars.

19. **Subsection 509.5 Method of Measurement** This Subsection has been revised to clarify how the Department measures areas with multiple types of bridge deck repair. This revision reflects Department practice and the consensus agreement with industry representatives through the Bridge Technical Committee. This change is a modification of an earlier Supplemental Specification.

20. **Subsection 509.6.6 Full Depth Deck Repair** This Subsection has been revised to clarify how the Department pays for areas with multiple types of bridge deck repair. This revision reflects Department practice and the consensus agreement with industry representatives through the Bridge Technical Committee.

21. **Subsection 625.3.2 Processing Topsoil or Salvaged Topsoil** This Subsection has been revised to clarify Department policy on the excavation of and payment for Salvaged Topsoil. Material from within the limits of the roadbed foundation (one to one slopes) in embankment areas must be removed first as Salvaged Topsoil. Additional unstable topsoil material from within the limits of the roadbed foundation in embankment areas should be removed as Excavation Below Subgrade. Excess topsoil removed from outside the limits of the roadbed foundation in embankment areas will not be paid for. The provision that called for deductions to the pertinent excavation item for excess salvaged topsoil has been eliminated because it was impractical to measure and administer in the field. The description of the procedure for substitution of Salvaged Topsoil for contract quantities of Topsoil to be furnished by the contractor from sources outside the right of way has been moved here from paragraph two of Subsection 205.3.1 "Preparing Roadway Foundation".

22. **Subsection 630.2.1.5.1.1.1 Composition** Standard Special Provision 630-001m is incorporated into the Standard Specifications to allow an additional acceptable variety, Salty, for Salt Grass.

23. **Subsection 643.1 Description** Paragraph one is revised to remove the reference to flagging of traffic, since flagging is now being described in Subsection 104.6.1. The last sentence is also amended to clarify the Department's policy on the use of smaller than standard sized signs.

24. **Subsection 643.2.4 Drums** Paragraph two is revised to specify that the type of reflective sheeting used on drums shall have performed adequately on the test deck of a national product evaluation program.

25. **Subsection 643.2.5 Barricades** This Subsection is revised to specify that the type of reflective sheeting used on barricades shall have performed adequately on the test deck of a national product evaluation program.

26. Subsection 643.2.6.1 Flexible Tubular Marker Posts Paragraph three is revised to specify that the type of reflective sheeting used on flexible tubular markers shall have performed adequately on the test deck of a national product evaluation program.

27. Subsection 643.2.7 Hand Signaling Devices This Subsection is revised to specify the minimum mounting height for the STOP/SLOW paddle used in flagging operations.

28. Subsection 643.2.12.1 General Paragraph six is added to this subsection to clarify the minimum maintained retroreflectance of temporary traffic control signs, other than the orange work zone signs. The minimum maintained retroreflectance of orange work zone signs is specified in Subsection 643.2.12.2. This change is a modification of an earlier Supplemental Specification.

29. Subsection 643.3.4 Signs This Subsection is revised to specify the minimum height of post-mounted temporary traffic control signs, in accordance with Part VI of the Manual on Uniform Traffic Control Devices, Section 6F-1.

30. Subsection 643.3.12 Fixed Message Signs This Subsection is revised to specify the minimum height of post-mounted fixed message signs, in accordance with Part VI of the Manual on Uniform Traffic Control Devices, Section 6F-1.

31. Subsection 643.5.1 Traffic Control Paragraph one is revised to remove the reference to flagging of traffic, since flagging is now being included in Subsection 104.6.1.

32. Subsection 645.2.4 Geotextile Fabric, Type DF (Drainage Filtration) The puncture strength requirement under Schedule A has been relaxed from 200 N to 175 N. Schedule C has been added to allow the use of monofilament woven materials. A Schedule C fabric would be specified where retained soil gradations may point toward a clogging problem and continued long term function of the drain is essential. Both changes are intended to increase competition by including the material from more suppliers.

33. Subsection 645.2.6 Geotextile Fabric, Type R (Riprap) The apparent breaking elongation has been relaxed for 20% to 15% to allow use of new monofilament and fibrillated yarn fabrics. This should potentially increase competition since a wider range of fabrics will be acceptable for use.

34. Subsection 645.2.7 Geotextile Fabric, Type HR (Heavy Riprap) The apparent breaking elongation has been relaxed for 20% to 15% to allow use of new monofilament and fibrillated yarn fabrics. This should potentially increase competition since a wider range of fabrics will be acceptable for use.

35. Subsection 646.2.3.1 General Paragraph four of this Subsection is changed to upgrade the contractor roundness criteria to match the Department's own maintenance criteria.

36. **Subsection 646.2.4.4.3 Qualification** This Subsection is revised to ensure the monitoring of new or improved epoxy products until the Department establishes a satisfactory performance record for their use. The requirement for an infrared spectra of each component has been eliminated.

For your information, the following specifications have been issued:

	Effective From Letting	to Letting
1996 Standard Specifications	Oct. 1996	Until Superseded
1996 Supplemental Specifications	Oct. 1996	Oct. 1997
Interim S.S. No. 1	Jan. 1997	Oct. 1997
1997 Supplemental Specifications	Oct. 1997	Oct. 1998
Interim S.S. No. 1	June 1998	Oct. 1998
1998 Supplemental Specifications	Oct. 1998	Until Superseded

Prepared By: Michael Hall - Standard Specifications Engineer
Bureau of Highway Construction

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STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

Supplemental Specifications

amending the
1996 Edition of the Standard Specifications
for
Highway and Structure Construction

1998 Edition

INTRODUCTION

The 1998 Supplemental Specifications amend the provisions of the Standard Specifications for Highway and Structure Construction, 1996 Edition, and shall be considered to be a part of those Standard Specifications, superseding any conflicting provisions in the Standard Specifications applicable to work under the contract.

A Supplemental Specifications Book will be issued annually. The Supplemental Specifications Book that applies to a proposal will be referenced in the General Special Provision of the proposal, but will not be bound into the proposal.

Supplemental Specification revisions that occur between annual editions will be issued as Interim Supplemental specifications, on an as-needed basis and in loose sheet format. The Interim Supplemental Specification that applies to a proposal will be referenced in the General Special Provision of the proposal, but will not be bound into the proposal.

The annual Supplemental Specifications Book and a copy of each Interim Supplemental Specification will be distributed at no charge, by a continuing update service, to the following group only:

- Prequalified Contractors
- Eligible Engineering Consulting Firms
- Selected WisDOT Employees

Prequalified contractors shall be responsible for notifying potential subcontractors and suppliers about Supplemental Specifications and the Interim Supplemental Specification that apply to a proposal.

Prequalified contractors and eligible engineering consulting firms shall be responsible for providing their employees with sufficient copies to enable them to perform their duties and responsibilities under a contract with the Department.

The current Supplemental Specifications book and Interim Supplemental Specification will be included with each Standard Specifications Book that is issued or purchased. No charge for the Supplemental Specification will be made. There will be no updating service except when the Standard Specifications Book is issued to, or is bought by, a member of one of the three groups listed above.

Supplemental Specifications and/or Interim Supplemental Specifications may be requested in writing, at no charge, from the following address:

Wisconsin Department of Transportation
Bureau of Highway Construction, Room 601
P.O. Box 7916
Madison, WI 53707-7916

Supplemental Specifications and Interim Supplemental Specifications also may be obtained, at no charge, at the Bureau's Office, Room 601, Hill Harms Transportation Building, 4802 Sheboygan Avenue, Madison, Wisconsin.

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION INFRASTRUCTURE DEVELOPMENT
BUREAU OF HIGHWAY CONSTRUCTION
STANDARDS DEVELOPMENT SECTION

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PART I
GENERAL REQUIREMENTS AND COVENANTS

SECTION 101. DEFINITIONS AND TERMS

Add the following definition:

Consulting Firm. The individual, partnership, joint ventures, corporation or agency contracted by the Department to act directly or as a duly authorized construction representative providing services for the Department.

Replace the following two definitions:

Bidder. Any individual, partnership, joint venture, corporation, limited liability company, limited liability partnership, or a combination of any or all jointly, submitting a proposal (bid) for the work advertised in the invitation for bids, acting directly or through a duly authorized representative.

Contractor. The individual, partnership, joint venturers, corporation, limited liability company, limited liability partnership or agency undertaking the performance of the work under the terms of the contract and acting directly or through a duly authorized representative.

102.5 Preparation of Proposal

Replace sentence three of paragraph one with the following:

The substitute schedule shall be in a format conforming to the Department's guidelines for approval of computer generated Schedule of Prices and must be approved in writing by the Department prior to use, or the substitute schedule shall be in a format generated through use of Department supplied computer software.

Replace the last paragraph with the following:

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership or a limited liability partnership shall be signed by a member or by a duly authorized agent thereof. A proposal submitted by a joint venture shall be signed by a member or by a duly authorized agent of at least one of the firms. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. A proposal submitted by a limited liability company shall be signed by a duly authorized agent of the company. The required signatures shall in all cases appear in the space provided therefor on the proposal. All addenda to the contract shall be attached to the submitted proposal by the bidder.

102.6 Irregular Proposals

Replace paragraph four with the following:

If on a computer generated Schedule of Prices the item number is correct and the description is incorrect, then the description will be corrected to reflect the Department's form and line number sequencing.

102.7 Proposal Guaranty

Replace the entire text with the following:

No proposal will be considered unless accompanied by properly executed bid bond, of not less than five percent of the total bid, on the Department's form contained in the proposal, or cashier's check, certified check, bank's check or postal money order in the amount designated on the proposal and payable to the Department. Certified checks shall be drawn on the account of the bidder submitting the proposal.

The bidder may also meet the above requirements by having a properly executed annual bid bond of not less than five percent of the total bid(s) on file with the Department. The annual bid bond shall be on the form provided by the Department.

The surety issuing the bid bond must have an equivalent A.M. Best rating of A- or better and be licensed to do business in the State of Wisconsin.

If alternate bids are invited and submitted, the bidder may submit one proposal guaranty in the total amount required for the combined alternate which will also be considered as covering each individual proposal.

102.11 Competency of Bidders

Replace paragraph two with the following:

Any individual, partnership, corporation, joint venture, limited liability company or limited liability partnership desiring to bid on any work under the jurisdiction or management of the Department shall furnish the Department a statement on a form provided by the Department, which statement shall fully develop the financial ability, adequacy of plant, equipment and organization, prior experience and other pertinent and material facts required; certificates for insurance Types 1, 2 and 3 as required by Subsection 107.26 shall be included.

102.12 Disqualification of Bidders

Replace item three with the following:

3. More than one proposal for the same work from an individual, partnership, joint venture, corporation, limited liability company or limited liability partnership under the same or different names.

103.1 Consideration of Proposals

Replace paragraph five with the following:

Proposals will be considered irregular and will be rejected as nonresponsive if any of the unit bid prices are significantly unbalanced to the potential detriment of the Department.

104.6.1 General

Add the following at the end as paragraph ten:

Flagging and guidance of traffic shall be done according to the latest revision of Part VI, Traffic Controls for Construction and Maintenance Operations of the Wisconsin Manual on Uniform Traffic Control Devices, the provisions of Section 643, the contract, and as directed by the engineer. Flagging and guidance services, and signs associated with flagging and guidance, will be considered incidental to the items of work in the contract.

105.3 Conformity with Plans and Specifications

Replace paragraph eight with the following:

If the engineer determines that noncomplying work or materials may remain in place, the contract change order for the unit price adjustment will include a $400.00 lump sum credit to the Department for administrative costs, which credit shall cover all items contained in the contract change order.

Add the following at the end as paragraph nine:

If a portion of the work cannot be constructed in accordance with the SI Metric system dimensions and values shown in the plans, specifications or contract provisions, the contractor may construct that portion of the work to essentially equivalent U.S. Standard Measure system dimensions and values, provided written approval of the engineer has been obtained before construction of the work under consideration is started.

106.1 Source of Supply and Quality

Delete paragraphs eight, nine, and ten.

Add the following to the end:

The contractor may substitute a product manufactured or fabricated to the U.S. Standard Measure system of measurement for a product manufactured or fabricated to the SI Metric system of measurement, provided the following requirements are met:

1. The substitute product shall be manufactured or fabricated from the same material as the original product, and shall comply with the U.S. Standard Measure system version of the specification requirement for the original product.
2. Dimensions of the substitute product shall be essentially equal to dimensions of the original product. Established manufacturing and fabrication tolerances will be permitted except where absolute maximum or minimum dimensions are specified in the contract.

The contractor shall certify to the engineer in writing that the substitute product complies with the above requirements. The contractor shall not furnish the substitute product until the engineer has approved the product substitution in writing. There shall be no credit to the Department or additional payment to the contractor for such substitution.

107.12 Responsibility for Damage and Tort Claims

Replace paragraph one with the following:

The contractor and the contractor's insurer shall defend, indemnify and save harmless the State, its officers, agents (in this context, agents exclude consulting firms, Wisconsin Counties and Municipalities and their respective officers and employees) and employees, from all suits, actions or claims of any character brought because of any injuries or damages received or sustained by any person, persons or property on account of the operations of the contractor; or on account of or in consequence of any neglect in safeguarding the work, or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect or misconduct of the contractor; or because of any claims or amounts recovered for any infringement by the contractor of patent, trademark or copyright; or from any claims or amounts arising or recovered under the Worker's Compensation Act, relating to the contractor's employees; or any other law, ordinance, order or decree relating to the contractor's operations. So much of the money due the contractor under and by virtue of the contract as shall be considered necessary by the Department for such purposes, may be retained for the use of the State until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the Department. The contractor shall also comply with all of the above requirements defending, indemnifying and saving harmless the county, town or municipality in which the improvement is made and each of them separately or jointly and their officers, agents and employees.

Delete paragraph three.

107.17.3 Railroad Insurance Requirements

Replace the entire text with the following:

The contractor shall provide Railroad Protective Insurance coverage, as may be required by the special provisions. The policy shall name as insured parties the railroad which owns the affected right of way and premises plus such other railroads operating on the track by agreement with the owner. Copies of the policy shall be furnished in accordance with requirements of this subsection.

The contractor shall not enter onto the right of way or premises of the railroad for the purpose of doing work under the contract until the policy has been received by the Department.

Railroad Protective Liability. Where the project involves impact to railroad property as noted in the special provisions, the contractor or subcontractor shall maintain the following type and limits of insurance in addition to the types and limits of required insurance set forth in Subsection 107.26. Such required commercial insurance shall remain in force until such time as all work under or incidental to the contract has been completed by the contractor and accepted by the Department.

Type of Insurance	Minimum Limits Required
Railroad Protective Liability Insurance	$2 Million per occurrence; may be subject to an Annual Aggregate limit of not less than $6 million.

When this coverage is required, the contractor or subcontractor shall furnish evidence of the required coverage by submitting two copies of the policy to the Department prior to commencing work under the contract. The Department will send one copy to the railroad company.

A 60 day notice of cancellation or material change in coverage will be required. All coverage shall be placed with the insurance companies licensed to do business in the State of Wisconsin that have an A. M. Best rating of A- or better. The Department reserves the right to require other coverage and limits as detailed in the special provisions. The cost of providing the required insurance coverage and limits shall be considered incidental to the contract and no additional or special compensation will be made therefor.

107.22 Contractor's Responsibility for Utility Property and Services

Replace paragraph four with the following:

If utility facilities or appurtenances not identified in the contract are found, the engineer will determine whether adjustment or relocation of the utility is necessary to accommodate contract work. Arrangements will be made by the engineer with the utility or the contractor for adjustment or relocation deemed necessary by the engineer. Such work done by the contractor will be compensated as provided in Subsection 104.5.

Add the following at the end as paragraph five:

When specified in the contract, the requirements of Administrative Rule, TRANS 220 will apply.

107.25 Archeological and Historical Findings

Replace the entire text with the following:

Whenever the construction operations encounter human remains, or artifacts believed to be of archeological or historical significance, the contractor shall immediately cease operations at the encounter site and the contractor shall notify the responsible State agency or agencies, as the case may be. The contractor shall comply with directions of the responsible State agency or agencies, and shall cooperate in any necessary moving of construction operations from the site. Work may be continued elsewhere on the project unless otherwise directed by the engineer. Operations at the encounter site shall not resume until allowed by the responsible State agency or agencies.

Add the following new subsection.

107.26 Standard Insurance Requirements. The contractor shall maintain the following types and limits of commercial insurance in force until such time as all work under or incidental to the contract has been completed by the contractor and accepted by the Department:

Type of Insurance	Minimum Limits Required*
1. Commercial General Liability Insurance; shall be endorsed to include blanket contractual liability coverage.	$2 Million Combined Single Limits per Occurrence; may be subject to an Annual Aggregate Limit of not less than $4 Million.
2. Workers' Compensation and Employers' Liability Insurance.	Workers' Compensation: Statutory Limits Employers' Liability: Bodily Injury by Accident: $100,000 Each Accident Bodily Injury by Disease: $500,000 Each Accident $100,000 Each Employee
3. Commercial Automobile Liability Insurance; shall cover all contractor-owned, non-owned, and hired vehicles used in carrying out the	$1 Million-Combined Single Limits Per Occurrence.

contract.

*These requirements may be satisfied either through primary insurance coverage or through excess/umbrella policies.

Each bidder shall provide the Department with Certificates of Insurance as evidence that required coverages for Insurance Types 1, 2 and 3 are in force. The certificates shall be provided at the time of prequalification in accordance with requirements of Subsection 102.11.

A 60 day notice of cancellation or material change in coverage will be required. All coverage shall be placed with insurance companies licensed to do business in the State of Wisconsin that have an A.M. Best rating of A- or better. The Department reserves the right to require other coverage and limits as detailed in the special provisions. The cost of providing the required insurance coverage and limits shall be considered incidental to the contract and no additional or special compensation will be made therefor.

The above insurance requirements shall apply with equal force whether the work under the project is performed by the contractor, by a subcontractor or by anyone directly or indirectly employed by either of them.

108.7 Determination and Extension of Contract Time for Completion

Replace paragraph one with the following:

The time for completion of the work contemplated under the contract will be specified in the proposal as a specific number of calendar days including Saturdays, Sundays and holidays, subject to the provisions of Subsection 108.13.1; as a specific number of working days, excluding Sundays, Saturdays, New Year's Day, Martin Luther King Jr. Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Eve Day, Christmas Day, New Year's Eve Day and the period from November 16 through March 31, both dates inclusive, subject to the provisions of Subsection 108.12.2; or as a given calendar date on or before which the work shall be completed. The completion of work within the time as specified is an essential part of the contract.

108.8 Liquidated Damages

Replace the table with the following:

Original Contract Amount		*Daily Charge*	
From More Than	*To and Including*	*Calendar Day*	*Working Day*
$ 0	$ 100,000	$ 200.00	$ 400.00
100,000	300,000	290.00	580.00
300,000	500,000	480.00	960.00
500,000	1,000,000	725.00	1450.00
1,000,000	----	1100.00	2200.00

109.1.1 General

Replace the entire text with the following:

All work completed under contracts with the plans and schedule of prices developed under the U.S. Standard Measure system, will be measured by the engineer according to the U.S. Standard Measure system. All work completed under contracts with the plans and schedule of prices developed under the International System of Units (SI), will be measured by the engineer according to the International System of Units (SI). The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to standard engineering practice, as modified to meet Departmental requirements. Measurements and methods will be documented in accordance with procedures prescribed by the Department.

The completed work will be measured for final payment by the engineer, as specified for the various items elsewhere in the standard specifications, to determine the quantities of such items of work performed, and the contractor will be paid for the actual amount of work performed in accordance with the contract, as shown by the final measurements, with the following exceptions:

1. An agreement has been made to compensate the contractor on the basis of plan quantity.

   If the contractor and the engineer agree in writing the quantities of certain items or portions of items of work as set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, are in substantial agreement with actual quantities of work performed, compensation will be made based on the quantities set forth in the contract or on the plans, as originally drawn or subsequently corrected or revised, without measurement, and the contractor shall accept such compensation as full payment for such items, or portions of items, in accordance with the provisions of Subsection 109.2.

2. Contract change orders have been executed providing for methods of measurement other than provided elsewhere in the standard specifications for the various items.

   The quantities of work measured for final payment will be determined by using the methods of measurement applicable to the various items as a result of the contract change orders.

3. Plan dimension modifications have been requested by the contractor to accommodate a change from the SI Metric System to the U.S. Standard Measure System and have been approved by the engineer.

   The quantities to be measured for final payment will be the quantities of the various items actually constructed under the modified plan dimensions, or the quantities of the various items derived from the original plan dimensions, whichever is less.

4. Substitution of an item manufactured to the U.S. Standard Measure System for an item manufactured to the SI Metric System has been done in accordance with requirements of Subsection 106.1.

   The quantity measured for final payment will be the quantity actually furnished and constructed.

109.2 Scope of Payment

Add the following to the end as paragraph four:

For contracts with the plans and schedule of prices developed under the U.S. Standard Measure system, payment will be made under the U.S. Standard system units in the contract Schedule of Prices. For contracts with the plans and schedule of prices developed under the metric International System of Units (SI), payment will be made under the metric International System of Units (SI) units in the contract Schedule of Prices.

PART II
EARTHWORK

201.3.1 Forty Meter Unit

Replace the entire text with the following:

When so provided, the quantity of clearing or of grubbing will be measured by the full 40 m survey unit along the roadway centerline or reference line. When two or more roadways occur, the quantity of clearing or of grubbing will be measured by the full 40 m survey unit along the centerline or reference line of each roadway. For divided highways, units for each roadway will extend, in width, from 1.5 m outside the grading limit of that roadway to a line mid-way between the reference lines or centerlines for each roadway.

Only 40 m survey units within which it is necessary to remove at least four trees or stumps 75 mm or over in diameter, or any tree or stump or combination of trees or stumps 75 mm or over in diameter whose diameter or total diameters equal or exceed 300 mm will be included for payment. Measurements for diameter will be made as specified in Subsection 201.3.2.

All units included for payment will be paid for as full units.

204.2.2 Abandoning Pipes and Structures

Revise sentence one of paragraph twelve as follows:

Chips in the 6 mm to 10 mm range shall be used for sealing wells of 100 mm diameter, and chips in the 10 mm to 20 mm range shall be used for sealing wells larger than 100 mm diameter.

205.3.1 Preparing Roadway Foundation

Replace paragraphs one and two with the following:

Vegetation of a height greater than 300 mm shall be cut and properly disposed of before ground is broken for excavation or before embankment is placed thereon. Heavy sod, perishable material, unstable topsoil, and other undesirable foundation material underlying proposed roadway embankments within the limits of the assumed one to one slopes extending outward from the outer limits of the finished shoulders shall be removed. Muck, peat and other unstable material shall be removed, disposed of, or otherwise treated as shown on the plans.

All suitable topsoil material within the areas of excavation and within the limits described above for embankment areas, necessary and suitable to cover the slopes for the items of Salvaged Topsoil or Topsoil, shall be removed as Salvaged Topsoil as prescribed in Subsection 625.3.2 "Processing Topsoil or Salvaged Topsoil". Unstable topsoil lying within the limits described above for embankment areas, in excess of amounts necessary

to cover the slopes for the items Salvaged Topsoil or Topsoil, shall be removed as prescribed in Subsection 205.3.3 and paid for as Excavation Below Subgrade.

206.3.13 Disposal of Excavated Material

Replace paragraph one with the following:

Excavated material suitable for use as riprap may be so placed if such use is appropriate. Excavated material not used as riprap and suitable for backfilling may be so utilized. Excavated material not used for riprap or backfilling and suitable for the construction of embankments shall be used therefor in accordance with the requirements for Roadway and Drainage Excavation and Embankments, provided the contract contains a bid item of Common Excavation, Unclassified Excavation or Borrow Excavation, and there is a need for such excavated material in the embankment at the time of disposal. Payment for the excavated material used in the embankment construction will be at the contract unit price for Borrow Excavation. In the absence of a Borrow Excavation item in the original contract, payment will be made at the contract unit price for Common Excavation or Unclassified Excavation, as the case may be. The quantity of excavated material used in the embankment construction shall be determined in accordance with Subsection 205.5.1. Overhaul will not be allowed for excavated material placed in embankments.

PART III
BASE COURSES

304.1 Description

Delete paragraph seven.

Replace paragraph eight with the following:

Salvaged Asphaltic Pavement, Base Course, shall consist of the necessary processing of the stockpile, loading, hauling and placing salvaged asphaltic pavement as base course, at the locations shown on the plans or as directed by the engineer, in accordance with the specifications.

304.2.3.1 Asphaltic Pavement, Base Course

Delete the entire text and replace the subsection heading with the following:

304.2.3.1 (Blank).

304.2.3.2 Salvaged Asphaltic Pavement, Base Course

Replace the entire text with the following:

Stockpiled salvaged asphaltic pavement material to be used as Base Course, Gradation No. 1, (Subsection 304.2.6) shall be processed as necessary so 100 percent will pass a 37.5 mm sieve.

Stockpiled salvaged asphaltic pavement material to be used as Base Course, Gradation No. 2 or No. 3, (Subsection 304.2.6) shall be processed as necessary so 100 percent will pass a 25.0 mm sieve.

Other requirements of Subsection 304.2 shall not apply.

304.9.1 General

Replace paragraph one with the following:

The items of Crushed Aggregate Base Course; Crushed Aggregate Base Course, Detours; Salvaged Crushed Aggregate Base Course; Producing and Stockpiling Crushed Aggregate Base Course; Hauling and Placing Crushed Aggregate Base Course; Crushed Aggregate Base Course, Open Graded Number (-); and Salvaged Asphaltic Pavement, Base Course will each be measured as provided in the contract by the megagram, or in the vehicle by the cubic meter. The quantity to be measured for payment shall be the amount of material required and incorporated in the work or placed in stockpiles in accordance with the contract.

304.10 Basis of Payment

Delete paragraph six.

Replace paragraph seven with the following:

The quantity of aggregate for the item of Salvaged Asphaltic Pavement, Base Course, measured as provided above, will be paid for at the contract unit price per megagram or per cubic meter, which price shall be full compensation for the necessary processing of the stockpile, loading, hauling, placing and compacting; for maintaining; for preparing foundation; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

306.7.1 Asphaltic Base Course

Replace paragraph one with the following:

The quantity of Asphaltic Base Course, measured as provided above, will be paid for at the contract unit price per megagram. This price shall be full compensation for furnishing all materials, except asphaltic materials; for preparing, mixing, hauling, placing and compacting; for preparing foundation, unless otherwise provided; and for all labor, tools, equipment and incidentals, including maintenance until acceptance, necessary to complete the work.

306.7.2 Asphaltic Base Course Widening

Replace paragraph one with the following:

The quantity of Asphaltic Base Course Widening, measured as provided above, will be paid for at the contract unit price per megagram, which price shall be full compensation for all excavation, reconstructing earth shoulders, satisfactory disposal of surplus or unsuitable excavated material; for the preparation and compaction of the foundation; for furnishing, preparing, handling, placing and consolidating the asphaltic mixture; for furnishing all materials, except asphaltic materials; and for all labor, tools, equipment and incidentals necessary to satisfactorily complete the work.

PART IV
PAVEMENTS

401.3.1 General Requirements

Replace paragraph five with the following:

The grade of penetration graded or viscosity graded asphaltic materials, including asphalt emulsions used for tack coat, may be changed by the contractor one step at no change in unit price when permitted by the engineer in writing. No change in the grade of performance graded asphaltic materials will be permitted.

401.3.4 Asphalt, Type AC

Delete the text and table previously added in Supplemental Specifications - 1997 Edition.

Add the following at the end as paragraph five:

Performance graded asphalt cements shall meet the binder specifications & test method tolerances as tabulated in the most recent edition of the Department's "Certification Method of Acceptance for Asphalt Cements".

402.2 Materials

Replace paragraph two with the following:

Asphaltic material shall be MS-2, SS-1, SS-1h, CSS-1, CSS-1h, or Modified Emulsified Asphalt, unless otherwise specified in the contract.

402.4.1 General

Replace paragraph three with the following:

The existing surface designated for tack coat treatment shall receive a coat of asphaltic material of the type and grade specified in the contract. The diluted tack coat material shall be applied at an estimated rate of 1L/10m^2 of surface area unless otherwise specified in the contract. Daily application shall be limited to approximately that area of surface reasonably expected to be paved during the same day.

403.3.3.1 Required Tests for a Contract of 4600 Megagrams of Mixture or Greater

Replace paragraph one with the following:

The contractor shall use the methods indicated below, or other methods approved by the engineer, to perform the following tests at a frequency not less than that indicated:

Replace paragraph eight with the following:

The split portion of the contractor asphaltic mixture and blended aggregate shall be retained for 14 calendar days at the laboratory site by the contractor. This 14-day retention period may be decreased if approved by the engineer. At the completion of the project, the remaining samples may be disposed of with the approval of the engineer. The samples shall be stored in a dry and protected location.

403.3.3.3 Required Tests for a Contract of Less Than 460 Megagrams of Mixture

Correct the subsection number.

Replace the entire text with the following:

All testing may be waived, by the engineer. If all testing is waived, the item of Quality Management Program, Asphaltic Mixture will not be measured and paid for.

403.3.3.4 Required Tests for Temporary Pavements

Replace the entire text with the following:

Temporary pavements are defined as those pavements which will be placed and removed before the completion of the contract. All testing may be waived by the engineer.

If all testing is waived, the item of Quality Management Program, Asphaltic Mixture will not be measured and paid for.

403.3.4.2 Control Charts

Replace paragraph three with the following:

The following data shall be recorded on the standardized control charts:

Blended Aggregate Gradation Tests (Sieves - Percent passing)
9.5 mm, 2.36 mm, 600 µm, 75 µm
Asphalt Content, percent
Marshall Bulk Specific Gravity
Maximum Specific Gravity
Air Voids, percent
Voids Mineral Aggregate, percent

403.3.5 Control Limits

Replace the entire text with the following:

The following control limits for the Job Mix Formula and warning limits are based on a running average of the last four data points:

Item	*Job Mix Formula Limits*	*Warning Limits*
Sieve - percent Passing		
9.5 mm	± 5.5	± 4.0
2.36 mm	± 5.0	± 4.0
600 µm	± 4.5	± 3.5
75 µm	± 2.0	± 1.5
Asphalt Content, percent	± 0.4	± 0.3
Air Voids, percent	± 1.3	± 1.0
Voids Mineral Aggregate, percent	- 1.5	- 1.2

403.4 Quality Assurance

Replace paragraph four with the following:

Differences between the contractor's and engineer's split sample test results will be considered acceptable if within the following limits:

Item	*Allowable Differences*
Sieve - percent Passing	
9.5 mm	6.0
2.36 mm	4.0
600 µm	3.5
75 µm	2.0
Marshall Bulk Specific Gravity	0.030
Maximum Specific Gravity	0.020

403.7 Basis of Payment

Add the following at the end as paragraph two:

If all testing is waived in accordance with provisions of Subsections 403.3.3.3 and 403.3.3.4, the item of Quality Management Program, Asphaltic Mixture will not be measured and paid for.

405.3.4 Tack Coat

Replace the entire text with the following:

Tack coat shall be applied, in accordance with Section 402, to each lower layer and to each upper layer, of a plant-mixed asphaltic base or pavement scheduled to be overlaid with asphaltic mixture under the same contract.

407.2.1.1.4 Aggregate Gradation Master Range

Replace the entire text with the following:

The aggregates, including mineral filler when required, shall conform to the following gradation requirements.

The gradation values listed are the extreme limits for design purposes. Production testing tolerances may allow mixture production values that exceed the aggregate master range.

	*Gradation**			
Sieve Size	1	2	3	4
37.5 mm	100	--	--	--
25.0 mm	90-100	100	--	--
19.0 mm	55-95	90-100	100	--
12.5 mm	--	45-95	90-100	100
9.5 mm	--	--	35-95	90-100
4.75 mm	15-65	20-70	25-80	30-85
2.36 mm	10-50	10-55	15-60	20-65
600 µm	7-30	7-40	7-40	7-45
300 µm	5-20	5-25	5-25	5-30
75 µm	3-8	3-8	3-8	3-8

* Percent passing of total aggregate mass.

407.2.1.3 Salvaged Asphaltic Pavement Materials

Add the following at the end as paragraphs two and three.

The contractor shall process the salvaged asphaltic pavement stockpile as necessary to permit incorporation in the asphaltic pavement or base.

The area to be covered by processed stockpiled material shall be cleared and prepared to facilitate recovery of the maximum amount of the stockpiled material. The area on which the processed salvaged asphaltic pavement material is stockpiled shall be free of all clods, lumps or stones exceeding 50 mm.

407.2.1.4 Reclaimed Asphaltic Pavement Materials

Delete paragraphs two, three, and four.

Add the following new subsection.

407.2.1.5 Recovered Asphaltic Materials. The percentage of asphaltic materials from either salvaged asphaltic pavement or reclaimed asphaltic pavement (RAP) shall be established for the mixture design according to AASHTO T 164 using the appropriate dust correction procedure.

When test results indicate that a change has occurred in the salvaged or reclaimed asphaltic material percentage, a change in the design percentage of salvaged or reclaimed asphaltic material may be requested by the contractor or the Department. The request shall include at least two recent salvaged or reclaimed asphaltic pavement extractions from the contractor's mixture design laboratory.

When penetration graded or viscosity graded asphaltic materials are specified in the contract, the blend of new asphaltic material with the extracted asphaltic material from either salvaged asphaltic pavement or RAP shall meet the penetration or viscosity requirements for the originally specified asphaltic materials. The new asphaltic material shall not be more than two standard asphaltic material grades softer than the specified asphaltic material.

When performance graded (PG) asphaltic materials are specified in the contract, salvaged or reclaimed asphaltic pavement materials may be incorporated into the asphaltic mixture in amounts up to 25% for lower layers and 20% for upper layers without a change in PG grade. If greater amounts of salvaged or reclaimed asphaltic pavement materials are incorporated into the asphaltic mixture, the added asphaltic material shall be one PG grade lower, unless contractor or supplier testing indicates that the resultant blend meets the PG grade originally specified in the contract.

407.2.2.1.1 Definitions

Delete paragraph two under the definition for Manufactured Sand.

407.2.2.1.2 General Requirements

Replace paragraph three with the following:

The composite aggregate blend shall have a minimum fine aggregate angularity of 45, determined as prescribed in the Department's Test Method 1561.

407.2.2.2 Asphaltic Materials

Replace the entire text with the following:

The virgin or resultant blended asphaltic material shall be as designated in the contract.

Add the following new subsection.

407.3.1.3 Mixture Design VMA Requirements. Values in the following table shall apply to lower and upper layers of Asphaltic Concrete Pavement, Types HV, MV and LV, as appropriate.

	Mixture Design VMA Requirements, Minimum Percent		
Gradation	% Passing 2.36 mm Sieve	Coarse Mixture VMA, Min Percent	Fine Mixture VMA, Min Percent
1	25.0	12.0	13.0
2	30.0	12.5	13.5
3	35.0	14.5	15.0
4	40.0	15.0	15.5

Coarse Mixture - Mix with a JMF percent passing the 2.36 mm sieve less than or equal to the value shown in the above table.

Fine Mixture - Mix with a JMF percent passing the 2.36 mm sieve greater than the value shown on the above table.

407.3.2.1 Lower Layer

Replace the entire text with the following:

Gradation 2 (Subsection 407.2.1.1.4) shall be used unless otherwise designated in the contract.

Mixtures made in the design laboratory with aggregates and asphalt cement proposed for the work shall have the following properties:

	Gradation 1	Gradation 2
No. blows/end	75	75
Stability, min., N	6500	6500
Flow, 0.25 mm	8-16	8-16
Air Voids, percent	4.0	4.0
Percent Passing 75 µm Sieve/ Asphalt Cement Ratio	0.6-1.2	0.6-1.2
Tensile Strength Ratio, min, percent		
No additive	70.0	70.0
With additive	75.0	75.0

407.3.2.2 Upper Layer

Replace the entire text with the following:

Gradation 3 (Subsection 407.2.1.1.4) shall be used unless otherwise designated in the contract.

Mixtures made in the design laboratory with aggregates and asphalt cement proposed for the work shall have the following properties:

	Gradation 3	Gradation 4
No. blows/end	75	75
Stability, min., N	6500	6500
Flow, 0.25 mm	8-16	8-16
Air Voids, percent	4.0	4.0
Percent Passing 75 µm sieve/ Asphalt Cement Ratio	0.6-1.2	0.6-1.2
Tensile Strength Ratio, min. percent		
No Additive	70.0	70.0
With Additive	75.0	75.0

407.3.3.1 Lower Layer

Replace the entire text with the following:

Gradation 2 (Subsection 407.2.1.1.4) shall be used unless otherwise designated in the contract.

Mixtures made in the design laboratory with aggregates and asphalt cement proposed for the work shall have the following properties:

	Gradation 1	Gradation 2
No. blows/end	50	50
Stability, min., N	5300	5300
Flow, 0.25 mm	8-18	8-18
Air Voids, percent	3.5	3.5
Percent Passing 75 µm Sieve/ Asphalt Cement Ratio	0.6-1.2	0.6-1.2
Tensile Strength Ratio, min., percent		
No additive	70.0	70.0
With additive	75.0	75.0

407.3.3.2 Upper Layer

Replace the entire text with the following:

Gradation 3 (Subsection 407.2.1.1.4) shall be used unless otherwise designated in the contract.

Mixtures made in the design laboratory with aggregates and asphalt cement proposed for the work shall have the following properties:

	Gradation 3	Gradation 4
No. blows/end	50	50
Stability, min., N	5300	5300
Flow, 0.25 mm	8-18	8-16
Air Voids, percent	3.5	3.5
Percent passing 75 μm Sieve/ Asphalt Cement Ratio	0.6-1.2	0.6-1.2
Tensile Strength Ratio, min., percent		
No additive	70.0	70.0
With additive	75.0	75.0

407.7.1 General

Replace paragraph two with the following:

This price shall be full compensation for providing an asphaltic mixture design; for furnishing, preparing, hauling, mixing and placing of all materials, except asphaltic materials; for compacting mixtures; for preparing foundation, unless otherwise provided; and for all labor, tools, equipment and incidentals, including maintenance, necessary to complete the work.

410.1 Description

Replace the entire text with the following:

Salvaged Asphaltic Pavement shall consist of the complete removal of existing asphaltic surfacing at the locations required by the contract or as directed by the engineer, together with hauling and stockpiling of the salvaged material.

Salvaged Asphaltic Pavement, Milling shall consist of removing and salvaging existing asphaltic pavement by milling at the location and to the thickness indicated in the contract, or directed by the engineer, together with hauling and stockpiling the salvaged material.

Unless otherwise required in the contract, all salvaged asphaltic pavement material not incorporated in the work shall become the property of the contractor.

410.3.1 Salvaged Asphaltic Pavement

Replace paragraph one with the following:

The existing asphaltic pavement shall be removed in its entirety, taking all practical care to avoid incorporation of or damage to the underlying materials. Inclusion of excessive amounts of underlying materials or of aggregates from shoulders shall be cause for immediate suspension of the work until corrective procedures are instituted. The asphaltic pavement thus removed shall be stockpiled at a location which will permit incorporation in the asphaltic base, asphaltic pavement or salvaged asphaltic pavement, base course.

Delete paragraphs three and four.

410.3.2 Salvaged Asphaltic Pavement, Milling

Delete paragraphs three, six and seven.

410.5 Basis of Payment

Replace the entire text with the following:

Salvaged Asphaltic Pavement, measured as provided above, will be paid for at the contract unit price per megagram, or per square meter, as the case may be, which price shall be full compensation for removing, hauling, and stockpiling; and for furnishing all labor, equipment, tools and incidentals necessary to complete the work.

Salvaged Asphaltic Pavement, Milling, measured as provided above, will be paid for at the contract unit price per megagram, or per square meter, as the case may be, which price shall be full compensation for removal by milling, hauling, and stockpiling, and for furnishing all labor, equipment, tools and incidentals necessary to complete the work.

Add the following section.

SECTION 411. ASPHALTIC SURFACE

411.1 Description. The item of Asphaltic Surface shall consist of the construction of a plant mixed asphaltic surface on the approved prepared foundation, base course or existing surface in accordance with the specifications and in reasonably close conformity with the lines, grades, thicknesses and typical cross sections shown on the plans and as directed by the engineer.

Asphaltic Surface, Detours shall consist of furnishing and placing an asphaltic surface conforming to the above requirements at various locations and depths on the detour route, as shown on the plans and as directed by the engineer.

Asphaltic Surface, Patching shall consist of furnishing and placing an asphaltic surface conforming to the above requirements at various patching locations and depths as directed by the engineer.

Asphaltic Surface, Safety Islands shall consist of furnishing and placing an asphaltic surface at the safety island locations and depths, as shown on the plans or as directed by the engineer.

Asphaltic Surface, Driveways and Field Entrances shall consist of furnishing and placing an asphaltic surface at the various driveway and field entrance locations and depths, as shown on the plans or as directed by the engineer.

Asphaltic Surface, Temporary shall consist of furnishing and placing a temporary asphaltic surface at the locations and depths as shown on the plans or as directed by the engineer.

411.2 Materials. The requirements of Section 401 shall not apply to this work except as required in Section 407 for the production of Type LV or Type MV Asphaltic Concrete Pavement mixtures.

411.3 Composition of Mixture. The asphaltic mixture for the items of Asphaltic Surface; Asphaltic Surface, Detours; and Asphaltic Surface, Patching shall meet the requirements for either Type LV or Type MV Asphaltic Concrete Pavement as specified in Section 407.

The asphaltic mixture for the items of Asphaltic Surface, Safety Islands; Asphaltic Surface, Driveways and Field Entrances; and Asphaltic Surface, Temporary shall consist of an intimate mixture of coarse and fine mineral aggregates, with or without salvaged or reclaimed asphaltic pavement materials, uniformly coated and mixed with a Type AC asphaltic material in a suitable mixing plant.

411.4 Construction Methods.

411.4.1 General. The requirements of Section 403 shall not apply to this work. The requirements of Section 405 shall not apply to this work except as hereinafter specified.

The mixture for the items of Asphaltic Surface, Safety Islands and Asphaltic Surface, Patching may be placed by hand methods described in Subsection 405.3.9.

411.4.2 Compaction. Compaction for the items of Asphaltic Surface; Asphaltic Surface, Detours; Asphaltic Surface, Patching; Asphaltic Surface, Driveways and Field Entrances; and Asphaltic Surface, Temporary shall be accomplished by the Ordinary Compaction Procedure as described in Subsection 405.3.10.2.

Compaction for the item of Asphaltic Surface, Safety Islands shall be accomplished to the extent directed by the engineer.

411.4.3 Surface Requirements. The surface produced under the items of Asphaltic Surface; Asphaltic Surface, Detours; and Asphaltic Surface, Temporary shall be tested with a 3 m straightedge and shall show no variation greater than 6 mm from the testing edge of the straightedge between any two contracts with the surface. All humps and depressions exceeding the specified tolerance shall be corrected by removing defective work and replacing it with new material or by other methods of repair approved by the engineer.

The surface produced under the items of Asphaltic Surface, Patching; Asphaltic Surface, Safety Islands; and Asphaltic Surface, Driveways and Field Entrances shall be smooth and contoured as directed by the engineer.

411.5 Maintenance. The contractor shall be responsible for maintaining the asphaltic surface produced under the item of Asphaltic Surface, Temporary. Maintenance shall be done at no additional cost to the Department and shall be done to the satisfaction of the engineer for the time period specified in the contract. Maintenance furnished by the contractor shall include all labor, materials, equipment, tools and incidentals needed to accomplish the work.

411.6 Method of Measurement. All items of work described in Subsection 411.1 will be measured by the megagram as provided in Subsection 405.4.

Asphaltic materials required for and incorporated in the mixture will not be measured separately for payment.

411.7 Basis of Payment. The items of Asphaltic Surface; Asphaltic Surface, Detours; Asphaltic Surface, Patching; Asphaltic Surface, Safety Islands; and Asphaltic Surface, Driveways and Field Entrances, measured as provided above, will be paid for at the contract unit price per megagram, which price shall be full compensation for providing an asphaltic mixture design, when required; for furnishing, preparing, hauling, mixing and placing of all materials, including asphaltic material and any salvaged or reclaimed asphaltic pavement materials; for compacting the mixture; for preparing the foundation; and for all labor, tools, equipment and incidentals necessary to complete the work.

The item of Asphaltic Surface, Temporary, measured as provided above, will be paid for at the contract unit price per megagram, which price shall be full compensation for furnishing, preparing, hauling, mixing and placing all materials, including asphaltic material and any salvaged or reclaimed asphaltic pavement materials; for compacting the mixture; for preparing the foundation; for maintenance during the time period specified in the contract; and for all labor, tools, equipment and incidentals necessary to complete the work.

415.2.2 Concrete

Replace paragraph two with the following:

This work shall be constructed with Grade A, A2, A3, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP Air-Entrained Concrete, as specified under section 501, except as otherwise provided for Special High Early Strength Concrete Pavement Repair in Subsection 416.2.5 and for Concrete Pavement Repair in Subsection 416.2.4.

415.5.4 Consistency

Replace the entire text with the following:

A uniform consistency shall be continuously maintained in consecutive batches of concrete. Slump tests of concrete will be made in accordance with AASHTO T 119. Slump for various techniques shall be as follows:

Slip-Formed	Not Slip-Formed with Internal Vibration	Not Slip-Formed with Surface Vibration
65 mm or less	25 to 75 mm	38 to 75 mm

415.5.9.8.2 Profilograph

Add the following to the beginning as paragraph one:

The provisions of this subsection shall be applicable to the work when required by special provision in the contract.

415.7.1.1 General

Replace the entire text with the following:

Except as otherwise provided hereinafter for pavement with a thickness deficiency over 6.4 mm, the quantity completed and accepted, measured as provided above, will be paid for at the contract unit price per square meter for Concrete Pavement, which price shall be full compensation for furnishing, hauling, preparing, placing, curing and protecting of all materials, including cement, concrete masonry, joints and joint materials, dowels and tie bars, unless otherwise provided; for preparing foundation, unless otherwise provided; for filling core holes; for furnishing, operating, maintaining and repairing a profilograph, performing profilograph testing of the pavement surface, providing all special traffic control required for profilograph testing, and performing all necessary corrective actions and corrective work associated with profilograph testing, all if required by special provision in the contract; and for all labor, equipment, tools and incidentals necessary for constructing the pavement complete, exclusive of reinforcement.

416.1 Description

Replace paragraph four with the following:

Pavement Terminal Units shall consist of the construction of pavement terminal units, at the locations and in accordance with the design and details shown on the plans. A pavement terminal unit shall consist of a reinforced concrete sleeper slab and a structural steel wide flange beam. The work shall conform to the curing requirements for Concrete Pavements prescribed in Subsection 415.5.10.

Replace paragraph eleven with the following:

Concrete Surface Drains shall consist of the construction of concrete surface drains of the design shown on the plans or as modified by the engineer, at the required locations. The work shall conform to the curing requirements for Concrete Pavements prescribed in Subsection 415.5.10.

Replace paragraph twelve with the following:

Concrete Headers shall consist of construction of a header block extending the full width of the pavement, at the locations and of the design shown on the plans. The work shall conform to the curing requirements for Concrete Pavements prescribed in Subsection 415.5.10.

416.2.1 Pavement Terminal Units

Replace paragraph one with the following:

Concrete masonry used in the work shall conform to the requirements for concrete masonry Grade A, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified under Section 501. Reinforcement steel shall conform to the requirements of Section 505.

PART V
STRUCTURES

501.3.6.3.6 Size Requirements

Delete the last two paragraphs.

501.3.7 Fly Ash

Replace paragraph three with the following:

The contractor shall have the fly ash tested by a recognized laboratory as defined in Subsection 501.3.3, 30 days prior to the proposed use of the fly ash and every 30 days during the progress of the work. The manufacturer shall have daily uniformity tests conducted on the fly ash. These daily uniformity tests shall consist of a determination of the specific gravity, percent retained on the 45 mm sieve, loss on ignition, moisture content, sulfur trioxide content, and air content of the mortar. The Department may reduce the required frequency of the uniformity testing for specific tests on specific fly ash sources when statistical analysis of current data shows no significant probability of exceeding uniformity or specification limits.

501.4.3 Grades of Concrete

Replace the entire text with the following:

501.4.3.1 General Requirements. The grade of concrete to be used for the different items of work, except as provided for prestressed concrete members in Section 503 and for Special High Early Strength Concrete Pavement Repair in Subsection 416.2.5, or as otherwise specifically provided in the contract, shall be in accordance with the following subsections.

When a specific grade of concrete has been selected and used for an item of work, the selected grade shall be used throughout the entire construction of the item, except as specifically set forth in the grade descriptions.

501.4.3.2 Special Restrictions. When the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials the allowable grades of concrete for concrete pavement, approach slabs, barrier walls, surface drains, driveways, alleys, sidewalks, and curb and gutter shall be limited to:

Grade A: When Type II Portland cement is used.

Grade A-FA: When Type II Portland cement is used. Grade A-FA concrete shall not be placed on or south of State Trunk Highway 29 prior to May 1 except when permitted by the engineer, nor after October 1. Grade A-FA

concrete shall not be placed north of State Trunk Highway 29 prior to May 15 except when permitted by the engineer, nor after September 15. Grade A concrete shall be used for any work to be constructed during periods in which the use of Grade A-FA concrete is restricted.

Grade A-S: The uses and restrictions for Grade A-FA concrete shall apply.

Grade C: When Types I or III Portland cement are used.

Grade C-FA: When Types I or III Portland cement are used. Grade C-FA concrete shall not be placed on or south of State Trunk Highway 29 prior to May 1 except when permitted by the engineer, nor after October 1. Grade C-FA concrete shall not be placed north of State Trunk Highway 29 prior to May 15 except when permitted by the engineer, nor after September 15. Grade C concrete shall be used for any work to be constructed during periods in which the use of Grade C-FA concrete is restricted.

Grade C-S, C-IS and C-IP: The uses and restrictions for Grade C-FA concrete shall apply.

501.4.3.3 General Use. For all concrete not included under Section 501.4.3.2, the grades of concrete for the different items of work shall be:

Grade A: For Concrete Pavement, Concrete Masonry in structures and miscellaneous construction except as specifically delineated for other grades.

Grade A2: For Concrete Pavement, Curb, Gutter, Curb and Gutter, Barrier Wall or Sidewalk when these items are placed by a slip-formed process.

Grade A3: For Concrete Pavement and miscellaneous construction on low volume State Trunk Highways and other roads under municipal or local jurisdiction in areas where a proven performance record exists for similar mixes. The use shall be restricted to locations and applications specifically delineated in the contract plans or special provisions.

Grade A-FA: For Concrete Pavement, Concrete Masonry in structures and miscellaneous construction, except as specifically delineated for other grades. Grade A-FA concrete shall not be placed on or south of State Trunk Highway 29 prior to May 1 except when permitted by the engineer, nor after October 1. Grade A-FA concrete shall not be placed north of State Trunk Highway 29 prior to May 15 except when permitted by the engineer, nor after September 15. Grade A concrete shall be used for any

work to be constructed during periods in which the use of Grade A-FA concrete is restricted.

Grade A-S, A-IS and A-IP: The uses and restrictions for Grade A-FA concrete shall apply.

Grade B: For Concrete Base Course.

Grade B-FA: For Concrete Base Course. Grade B-FA concrete shall not be placed prior to May 15 except when permitted by the engineer, nor after September 15. Grade B concrete shall be used for any work to be constructed during this restricted period.

Grade B-S,B-IS and B-IP: The uses and restrictions for Grade B-FA concrete shall apply.

Grade C: For concrete pavement repair and other uses when required by the plans or special provisions.

Grade C-FA: For concrete pavement repair and other uses when required by the plans or special provisions. Grade C-FA concrete shall not be placed prior to May 15 except when permitted by the engineer, nor after September 15. Grade C concrete shall be used for any work constructed during this restricted period.

Grade C-S, C-IS and C-IP: The uses and restrictions for Grade C-FA concrete shall apply.

Grade D: For Concrete Masonry in decks, curbs, railings, parapets, medians and sidewalks of structures; and for Concrete Masonry, Seal modified as provided in Subsection 502.3.6.3.

Grade D-FA: For Concrete Masonry in decks, curbs, railings, parapets, medians and sidewalks of structures; and for Concrete Masonry, Seal modified as provided in Subsection 502.3.6.3. Grade D-FA Concrete shall not be placed prior to May 15 except when permitted by the engineer, nor after September 15. Grade D concrete shall be used for any work to be constructed during this restricted period.

Grade D-S, D-IS and D-IP: The uses and restrictions for Grade D-FA concrete shall apply.

Grade E: For Concrete Masonry overlays and repairs on decks of structures and approaches, when required by special provision.

502.3.9 Curing

Replace paragraphs fifteen and sixteen with the following:

Concrete Masonry in the inside faces of railings and parapets shall be cured by covering with wetted burlap immediately after the forms are removed and the required surface finish is applied and keeping such covering thoroughly wet for a period of at least four days; or by covering for a like period with thoroughly wetted polyethylene-coated burlap meeting the requirements of Subsection 415.2.5.5. Coverings shall be satisfactorily secured along all edges to prevent loss of moisture.

Concrete Masonry in the outside faces of railings, parapets, exterior girders and similar parts of the structure shall be cured by applying membrane curing material immediately after the forms are removed and the required surface finish is applied; or by covering with wetted burlap immediately after the forms are removed and the required surface finish is applied and keeping such covering thoroughly wet for a period of at least four days; or by covering for a like period with thoroughly wetted polyethylene-coated burlap meeting the requirements of Subsection 415.2.5.5. Coverings shall be satisfactorily secured along all edges to prevent loss of moisture.

502.3.12 Name Plates

Replace paragraph three with the following:

Each plate shall be rigidly attached to concrete structures by means of two lugs at least 75 mm long cast integral with the plate. The plate lugs shall be imbedded or epoxied in the concrete with the outer face of the border flush with the face of the concrete.

502.5.1 Description

Replace paragraph two with the following:

Concrete Masonry Anchors, Type L shall consist of drilling holes and furnishing and placing epoxy resin cartridges, and placing reinforcing bar anchors of the length and bar size shown on the plan.

502.7.6 Protective Surface Treatment

Replace the entire text with the following:

Protective surface treatment will be measured in square meters. The quantity measured for payment shall be the actual area of bridge deck and appurtenances treated in accordance with the contract.

502.8.6 Protective Surface Treatment

Replace the entire text with the following:

This item, measured as provided above, will be paid for at the contract unit price per square meter for Protective Surface Treatment. Such payment shall be payment in full for furnishing and applying all materials, for preparing and cleaning all surfaces, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work in accordance with the contract.

503.3.2.2.1 Steam Curing

Replace paragraph three with the following:

The temperature within the enclosure during the curing period shall be maintained between 10 C and 71 C. The temperature adjacent to the concrete in different locations within the housing shall not vary more than 12 C at any one time.

Add the following new subsection.

505.2.5 Welded Steel Wire Fabric for Concrete Reinforcement. Welded steel wire fabric for concrete reinforcement shall conform to AASHTO M 55M. The mass and design of the fabric shall be as shown on the plans.

505.2.6 Dowel Bars and Tie Bars

Replace the entire text with the following:

505.2.6.1 Dowel Bars. Dowel bars shall be plain, round, smooth, coated bars, free from burrs or other deformations detrimental to free movement of the bar in the concrete; shall have at least one end sawed; and shall be of the size and length shown on the plans. Dowel bars shall conform to AASHTO M 31M, Grade 300 or 400. Bend tests will not be required. The coating shall be a thermosetting epoxy and conform to AASHTO M 254, Type B. The coating applicator must have an Epoxy Coating Plant Certification by the Concrete Reinforcing Steel Institute. A surface treatment capable of preventing bond between the bar and the concrete shall be applied to the epoxy-coated bars. Manufacturer applied treatments meeting the above criteria will be allowed. Field surface treatments shall be applied when the bars are placed in the magazine of a dowel bar inserter or after the dowel assembly has been fastened to the base course.

Sawed ends, sheared ends, cut ends, ends left bare during the coating process or ends with damaged coating do not have to be coated or patched.

Damage to the coating on the circumferential surface area caused during shipment, handling or installation does not have to be repaired in cases where the damaged area is 6 by 6 mm or smaller and the sum of all damaged areas in each 300 mm length does not exceed two percent of the circumferential surface area in each 300 mm length. All damaged areas

larger than 6 mm square shall be repaired and all bars with total damage greater than two percent of bar circumferential surface area shall be rejected. The total circumferential surface area of the dowel bar covered by patching material shall not exceed five percent.

505.2.6.2 Tie Bars.

505.2.6.2.1 General. Tie bars shall be deformed, coated, steel reinforcement bars of the size, length and shape called for on the plans.

Bent tie bars shall meet the requirements of Grade 300 or 400 of AASHTO M 31M.

Straight tie bars shall conform to Grade 300 or 400 of AASHTO M 31M. Bend tests will not be required.

505.2.6.2.2 Coating. The coating shall conform to the requirements contained in Subsection 505.2.4, except as follows:

Sawed ends, sheared ends, cut ends, ends left bare during the coating process or ends with damaged coating do not have to be coated or patched.

Damage to the coating on the circumferential surface area caused during shipment, handling or installation does not have to be repaired in cases where the maximum dimension of the damaged area is 6 mm or less and the sum of all damaged areas in each 300 mm length does not exceed two percent of the circumferential surface area in each 300 mm length. All damaged areas larger than 6 mm shall be repaired and all bars with total damage greater than two percent of bar circumferential surface area shall be rejected. The total circumferential surface area of the tie bar covered by patching material shall not exceed five percent.

All coated tied bars which require straightening to tie adjacent concrete together shall be field coated with compatible coating material at the bend location after straightening.

505.3.3 Splicing

Add the following to the end as paragraph fifteen.

Sheets of welded steel wire fabric shall overlap each other sufficiently to maintain a uniform strength and shall be securely fastened at the ends and edges. The edge lap shall be not less than one mesh in width.

506.2.6.2. Preformed Fabric, Class A

Replace the entire text with the following:

This material shall consist of preformed fabric pads composed of multiple layers of 227 g cotton duck impregnated and bound with high-quality natural rubber or of equivalent and equally suitable materials compressed into resilient pads of uniform thickness. The number of plies shall be such as to produce the specified thickness after compression and vulcanizing. The finished pads shall withstand compression loads perpendicular to the plane of the laminations of not less than 69 MPa without detrimental extrusion or reduction in thickness, under testing conducted in accordance with MIL-C-882E procedures.

506.2.6.3. Non-Laminated Elastomeric

Replace paragraph two and the entire table of required physical properties with the following:

The pads shall conform to the following physical properties:

	Natural Rubber	*Chloroprene*
Grade (Durometer)	60	60
Physical Properties		
Hardness (ASTM D 2240)	60±5	60±5
Tensile strength, kPa (ASTM D 412)	15 500	15 500
Ultimate elongation, min. percent	400	350
Heat Resistance, 70 hrs. at 70 C (ASTM D 573)		
Hardness, max. points change	+10	+15
Tensile strength, max. percent change	-25	-15
Ultimate elongation, max. percent change	-25	-40
Compression Set (ASTM D 395, Method B)		
22 hrs. at 70 C max. percent	25	--
22 hrs. at 100 C max. percent	--	35
Ozone (ASTM D 1149), 20 percent strain 38±1 C, mounting procedure ASTM D 518, Method A		
25 pphm ozone in air by volume, 48 hrs.	No cracks	--
100 pphm ozone in air by volume, 100 hrs.	--	No cracks

506.2.6.4.3 Testing

Replace paragraph two with the following:

The pads shall conform to the following physical properties:

	Natural Rubber	*Chloroprene*
Adhesion Test		
Bond made during vulcanization, (ASTM D 429, Method B)	18 kg/25 mm	18 kg/25 mm
Low Temperature Test		
Brittleness at -40 C (ASTM D746, Procedure B)	No Failure	No Failure

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507.2.2.6.1 General

Replace paragraph three with the following:

Unless otherwise specifically provided in the contract, the preservative treatment of structural lumber and timber shall be with one of the following: creosote- coal tar solution, a pentachlorophenol solution in petroleum solvent, a chromated copper arsenate solution, an ammoniacal copper arsenate solution, an ammoniacal copper zinc arsenate solution, a copper napthenate solution, or an ammoniacal copper quat solution, except that Coastal Douglas Fir shall not be treated with chromated copper arsenate or ammoniacal copper quat, and Hem-Fir shall not be treated with copper naphthenate.

Add t*he following to the end as paragraph eleven:*

The ammoniacal copper quat solution shall conform to the requirements specified under Subsection 507.2.3.8.

Add the following new subsection.

507.2.3.8 Ammoniacal Copper Quat Ammoniacal copper quat solution used in the preservative treatment of lumber and timber shall conform to Type D, as specified in AWPA P5.

509.1 Description

Replace paragraph three with the following:

The items of Preparation, Decks, Type 1; Preparation, Decks, Type 2; and Preparation, Approaches shall consist of the removal of all asphaltic patches and unsound or disintegrated areas of concrete decks and approach pavements as shown on the plans or as directed by the engineer.

509.4.2 Preparation

Add the following as paragraphs two and three.

Under the item of Preparation, Decks, Type 1, existing asphaltic patching and unsound bridge deck concrete shall be removed only to that depth which will expose one-half of the peripheral area of the top or bottom bar steel in the top mat of reinforcement.

Under the item of Preparation, Decks, Type 2, existing unsound bridge deck concrete shall be removed below the limit of the Type 1 removal described above. The minimum depth of Type 2 removal shall be 25 mm below the bottom of the top or bottom bar steel in the top mat of reinforcement. Further removal shall be as directed by the engineer.

509.5 Method of Measurement

Replace paragraph two with the following:

Preparation, Decks, Type 1 will be measured by area in square meters of work done in accordance with requirements for Type 1 bridge deck preparation, completed and accepted. Preparation, Decks, Type 2 will be measured by area in square meters of work done in accordance with requirements for Type 2 bridge deck preparation, completed and accepted. Preparation, Approaches will be measured by area in square meters of work done in accordance with requirements for approach pavement preparation, completed and accepted. Areas of Type 2 removal will not be subtracted from areas of Type 1 removal. Areas of Full Depth Deck Repair directed by the engineer prior to beginning the Type 1 or Type 2 deck removals will be subtracted from the areas of the Type 1 or Type 2 removals. Areas of full depth Deck Repair directed by the engineer after Type 1 or Type 2 deck removals are underway will not be subtracted from the areas of the Type 1 or Type 2 removals. Areas of Joint Repair will not be measured under these items.

509.6.2 Preparation

Replace the entire text with the following:

The quantity, measured as provided above, will be paid for at the contract unit price per square meter for Preparation, Decks, Type 1, Preparation, Decks, Type 2 or Preparation, Approaches, as the case may be, which price shall be payment in full for removing asphaltic patches and unsound concrete; for disposal of waste materials; and for furnishing all equipment, tools, labor and incidentals necessary to complete the work in accordance with the contract.

509.6.6 Full Depth Deck Repair

Replace paragraph one with the following:

This item, measured as provided above, will be paid for at the contract unit price per square meter, which price shall be full compensation for the complete removal of the deteriorated concrete areas; for disposal of waste material; for forming; for salvaging and using the existing bar steel reinforcement; and for furnishing all equipment, tools, labor and incidentals necessary to complete work in accordance with the contract. This item will be paid at the contract unit price regardless of whether it is directed by the engineer before or after beginning the Type 1 or Type 2 removals.

520.3.3 Laying Pipe

Add the following as paragraph four:

At the contractor's option, sealers meeting the requirements of Subsections 607.2.3, 607.2.4, 607.2.5 or 607.2.6 may be used instead of the geotextile fabric joint wrap. Construction methods for sealing the joints with these sealers shall comply with Subsection 607.3.4. There shall be no additional compensation to the contractor for using sealers instead of geotextile fabric.

520.6 Basis of Payment

Replace paragraph one with the following:

The quantity of pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Culvert Pipe, (Class), Pipe Cattle Pass, or Temporary Culvert Pipe as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe, including bands, geotextile joint wrap when required, and joint tie when required; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below;

and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

521.6 Basis of Payment

Replace paragraph one with the following:

The quantity of corrugated steel pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Corrugated Steel Culvert Pipe, Corrugated Steel Pipe Arch or Corrugated Steel Pipe Cattle Pass, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe or pipe arch, including bands and concrete walkway for pipe cattle pass; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone masonry headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

522.6 Basis of Payment

Replace paragraph one with the following:

The quantity of reinforced concrete pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Reinforced Concrete Culvert Pipe (Class) or Reinforced Concrete Pipe Cattle Pass, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe, including concrete walkway for pipe cattle pass, geotextile joint wrap, and joint ties when required; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone masonry headwalls will be paid for in accordance with the provisions of the specifications for items of work involved.

523.6 Basis of Payment

Replace paragraph one with the following:

The quantity of reinforced concrete horizontal elliptical pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Reinforced Concrete Horizontal Elliptical Culvert Pipe (Class) which price shall be payment in full for furnishing, hauling and placing the pipe, geotextile joint wrapping, and joint ties when required; for all excavation, including foundation or bed and any

associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

524.6 Basis of Payment

Replace paragraph one with the following:

The quantity of salvaged pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the specified size for Salvaged Culvert Pipe, Salvaged Corrugated Steel Pipe Arch or Salvaged Pipe Cattle Pass, as the case may be, which price shall be payment in full for excavating and removing pipe from existing location, cleaning and transporting; for all excavation, including foundation or bed and any associated dewatering; for placing pipe, including the furnishing of any necessary new bands; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; for furnishing and placing geotextile joint wrap when required and joint ties when required and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

525.6 Basis of Payment

Replace paragraph one with the following:

The quantity of corrugated aluminum pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Corrugated Aluminum Culvert Pipe which price shall be payment in full for furnishing, hauling and placing the pipe, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone masonry headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

528.6 Basis of Payment

Replace paragraph one with the following:

The quantity of polymer coated corrugated steel pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the various sizes specified under the contract for Polymer Coated Corrugated Steel Culvert Pipe or Polymer Coated Corrugated Steel Pipe Arch, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe or pipe arch, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or

cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

529.6 Basis of Payment

Replace paragraph one with the following:

The quantity of aluminum coated corrugated steel pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the various sizes of pipe specified under the contract for Aluminum Coated Corrugated Steel Culvert Pipe or Aluminum Coated Corrugated Steel Pipe Arch, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe or pipe arch, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

530.6 Basis of Payment

Replace paragraph one with the following:

The quantity of corrugated polyethylene pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the various sizes specified under the contract for Corrugated Polyethylene Culvert Pipe, which price shall be payment in full for furnishing, hauling and placing the pipe, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

PART VI
INCIDENTAL CONSTRUCTION

601.2 Materials

Replace the last paragraph with the following:

Concrete masonry used in the work shall be manufactured in accordance with and conform to the requirements for Concrete Masonry Grade A, A2, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified in Section 501.

602.2 Materials

Replace the last paragraph with the following:

Concrete masonry used in the work shall conform to the requirements for Concrete Masonry Grade A, A2, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified in Section 501.

603.2 Materials

Replace paragraph two with the following:

Concrete masonry used in the work shall conform to the requirements for Concrete Masonry Grade A, A2, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified in Section 501.

612.6 Basis of Payment

Replace paragraph one with the following:

The quantity of pipe underdrain, measured as provided above, will be paid for at the contract unit price per meter of each of the various sizes for Pipe Underdrain (Size); Pipe Underdrain, Unperforated (Size); Pipe Underdrain, Wrapped (Size); Pipe Underdrain, Wrapped and Plowed (Size); or Pipe Underdrain, Drain Tile (Size), as the case may be; which price shall be full compensation for furnishing, transporting, handling and placing all materials, including pipe, geotextile wrapping, connections, fittings, rodent screens and caps or plugs; for all excavation, plowing and recompaction, salvage and placement of upper tillable or agricultural soil suitable for supporting vegetation, disposal of surplus material and restoring the site of the work; for all backfill, except as provided below; and for all labor, tools, equipment and incidentals necessary to complete the work. Open-graded material required for trench backfill in the edgedrain system for concrete pavements will be measured and paid for under the separate bid item of Crushed Aggregate Base Course, Open Graded No. 1 or No. 2.

614.1 Description

Replace paragraph one with the following:

This work shall consist of the construction of cable guard fence, steel plate beam guard, steel thrie beam structure approach, anchorages, terminal ends, crash cushions including replacement cartridges, impact attenuators and marker posts; the construction and removal of temporary steel plate beam guard and anchorages; the salvaging of guard fence; and the adjusting of steel plate beam guard; all at the locations and in accordance with the design and details indicated on the plans and provided by the contract.

Add the following at the end as paragraphs twenty-two and twenty-three:

Steel Plate Beam Guard, Slotted Rail Terminal, shall consist of furnishing and installing slotted rail terminal ends for Steel Plate Beam Guard.

Steel Plate Beam Guard, Energy Absorbing Terminal, shall consist of furnishing and installing energy absorbing terminal ends for Steel Plate Beam Guard.

Add the following new subsection.

614.2.3.1 Energy Absorbing Terminal. Materials furnished for use in energy absorbing terminals for steel plate beam guard shall conform to the manufacturer's specifications.

Add the following new subsection.

614.3.3.1 Energy Absorbing Terminal. Energy absorbing terminals for steel plate beam guard shall be installed in accordance with the manufacturer's instructions, the plans and pertinent parts of these specifications.

614.4 Method of Measurement

Replace paragraph four with the following:

Marker Posts; Marker Posts for Right of Way; Anchorages for Cable Guard Fence; Anchorages for Steel Plate Beam Guard; Anchorages for Temporary Steel Plate Beam Guard; Anchor Assemblies for Steel Plate Beam Guard; Impact Attenuators; Steel Plate Beam Guard, Slotted Rail Terminal; and Steel Plate Beam Guard, Energy Absorbing Terminal, will each be measured complete in place as units.

614.5 Basis of Payment

Add the following at the end as paragraphs thirteen and fourteen:

Steel Plate Beam Guard, Slotted Rail Terminal, measured as provided above, will each be paid for at the contract unit price, which price shall be payment in full for furnishing and installing all materials required under this system; for setting and driving of posts; for all excavation, backfilling and disposal of surplus material; and for all labor, tools, equipment and incidentals necessary to complete the work.

Steel Plate Beam Guard, Energy Absorbing Rail Terminal, measured as provided above, will each be paid for at the contract unit price, which price shall be payment in full for furnishing and installing all materials required under the selected system; for setting and driving of posts; for all excavation, backfilling and disposal of surplus material; and for all labor, tools, equipment and incidentals necessary to complete the work.

620.1 Description

Replace the entire text with the following:

The item of Concrete Corrugated Median shall consist of the construction of concrete corrugated median including nose section, placed in one course on a prepared foundation, at the locations and in reasonably close conformity with the design, dimensions, lines and grades; all as shown on the plans and provided in the contract.

The item of Concrete Median Blunt Nose shall consist of construction of a blunt concrete median nose section only, at the locations and to the design shown on the plans.

The item of Concrete Median Sloped Nose shall consist of construction of a sloped concrete median nose section only, at the locations and to the design shown on the plans.

620.4 Method of Measurement

Replace the entire text with the following:

The item of Concrete Corrugated Median will be measured by area in square meters in place, including the nose section, completed and accepted in accordance with the requirements of the plan and contract.

The items of Concrete Median Blunt Nose and Concrete Median Sloped Nose will be measured by area in square meters in place, completed and accepted in accordance with the requirements of the plan and contract.

620.5 Basis of Payment

Replace the entire text with the following:

The quantity of concrete corrugated median including nose section, measured as provided above, will be paid for at the contract unit price per square meter for Concrete Corrugated Median, and the quantity of concrete median nose only, measured as provided above, will be paid for at the contract unit price per square meter for Concrete Median Blunt Nose or Concrete Median Sloped Nose, as the case may be; which price shall be payment in full for preparation of foundation, for furnishing all materials, including concrete masonry, joint filler and tie bars; for hauling, placing, consolidating, shaping, finishing, curing and protecting the concrete; for disposal of surplus materials; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

625.3.2 Processing Topsoil or Salvaged Topsoil

Replace the entire text with the following:

All areas from which topsoil is procured shall be cleared, if necessary, by means of mowing weeds or other vegetation to a height of approximately 150 mm, and freed from any litter such as brush, rock or foreign material of objectionable size or quantity.

The humus-bearing soil shall then be stripped off taking care to avoid incorporation of any underlying sterile soil. The topsoil may then be stockpiled on the right of way or placed directly on the designated areas.

The item of Salvaged Topsoil shall include the removal of suitable humus bearing topsoil from the sites of the proposed roadway embankments within the limits of the assumed one to one slopes extending outward from the outer limits of the finished shoulders. Suitable topsoil lying within these limits necessary to cover the slopes for the item of Salvaged Topsoil or Topsoil shall be removed. Unstable topsoil lying within these limits, in excess of amounts necessary to cover the slopes, shall be removed as prescribed in Subsection 205.3.3 and paid for as Excavation Below Subgrade.

The removal of topsoil from the site of the proposed roadway lying outside of the assumed one to one slopes in embankment areas shall only be paid for under the item of Salvaged Topsoil or Topsoil if that material is necessary to cover the slopes.

Salvaged Topsoil in excess of the contract quantity shall be used to supplant the requirements for contract quantities of Topsoil to be furnished by the contractor from sources outside the right of way. Material excavated in excess of the amounts required to cover the slopes shall be disposed of by the contractor with no additional compensation as described in Subsection 205.3.11.

628.3.2 Erosion Mat

Add the following to the end as paragraph eight:

Type Urban erosion mat shall not be overlapped with Type Urban or other type erosion mat.

630.2.1.5.1.1.1 Composition

Revise the entry for Salt Grass in the first table of paragraph two as follows:

Species Common Name	Species Botanical Name	Acceptable Varieties
Salt Grass	Puccinella distans	Fult's
	Puccinella distans	Salty

642.2.1 General

Add the following to the end as paragraphs three and four:

A first aid kit shall be supplied by the contractor in each field office and field laboratory provided under the contract. The kits shall be readily accessible to project personnel. The contents of each kit shall be checked at least once each week and expended items shall be replenished. Each kit shall contain, at a minimum, a supply of latex or nitrile gloves, CPR masks, adhesive tape, pressure and cling bandages, antiseptic wipes, bite/sting swabs, cold packs, and safety goggles.

In situations where the eyes or body of a worker may be exposed to corrosive or potentially harmful materials, the contractor shall provide emergency use facilities capable of flushing the eyes or drenching the body of an exposed worker with water for 15 minutes.

643.1 Description

Replace paragraph one with the following:

This work shall consist of furnishing, erecting, maintaining, moving and removing traffic signs, including demountable legend plaques, pavement markings, drums, barricades, flexible tubular markers, arrow boards, lights and signals. This work shall be done in accordance with the latest revision of Part VI, Traffic Controls for Construction and Maintenance Operations of the Wisconsin Manual on Uniform Traffic Control Devices except as noted hereafter, the contract, and as directed by the engineer. Sign sizes smaller than the standard sizes described in the manual shall not be used except where there are space limitations and as permitted in the manual.

643.2.1 General

Replace the entire text with the following:

Materials used in the work shall conform to the requirements specified in the Manual on Uniform Traffic Control Devices and the following:

Retroreflective sheeting on drums, barricades and other devices shall be kept clean. Scratches, rips and tears in the sheeting shall be corrected promptly by the contractor.

The retroreflectance of all drums, posts and barricades shall be maintained at a level not less than 50 percent of the minimum value required in Subsection 637.2.2.2 for Type H reflective sheeting.

643.2.2.1 General

Replace paragraph one with the following:

Arrow boards shall conform to the requirements for Arrow Display, 6F-3, Figure VI-9, Type C, of the MUTCD, unless otherwise specified.

643.2.4 Drums

Replace paragraph two with the following:

The material used for reflectorization shall conform to or exceed the requirements of Subsection 637.2.2.2, and shall be suitable for use on reboundable traffic control devices. The material shall have had good performance in 1-year tests in AASHTO's National Transportation Product Evaluation Program (NTPEP), with regard to shrinkage, cracking, blistering, colorfastness, reflectivity, adhesion, flexibility, and impact resistance.

643.2.5 Barricades

Replace the entire text with the following

The reflective sheeting for all barricades shall conform to or exceed the requirements of Subsection 637.2.2.2, designed specifically for use on rigid traffic control devices. The sheeting shall have had good performance in 1-year tests in AASHTO's National Transportation Product Evaluation Program (NTPEP), with regard to shrinkage, cracking, blistering, colorfastness, reflectivity, adhesion, and impact resistance.

643.2.6.1 Flexible Tubular Marker Posts

Replace paragraph three with the following:

The reflective sheeting for the flexible tubular marker posts shall meet or exceed the requirements of Subsection 637.2.2.2 and shall be suitable for use on reboundable traffic control devices. The sheeting shall have had good performance in 1-year tests in AASHTO's National Transportation Product Evaluation Program (NTPEP), with regard to shrinkage, cracking, blistering, colorfastness, reflectivity, adhesion, flexibility, and impact resistance.

643.2.6.3 Tests

Delete the entire text and replace the subsection heading with the following:

643.2.6.3 (Blank).

643.2.7 Hand Signaling Devices

Replace the entire text with the following:

The sign paddle shall be the primary hand-signaling device. Flag use shall be limited to emergency situations. The sign paddle shall be mounted on a rigid handle with a 1520 mm minimum mounting height to the bottom of the sign.

643.2.8.1 General

Add the following at the end as paragraphs four and five:

The sign face material for overlays shall match the base sign reflective sheeting material.

Non-word messages cannot be a sign overlay, except for the Lane Reduction Transition sign, WO4-2.

643.2.8.2 Demountable Plaque Overlay

Replace paragraph two with the following:

The sign face material for the plaque shall be reflective sheeting meeting the requirements of Subsections 637.2.2.1 or 643.2.12.

643.2.8.3 Sheeting Overlay

Replace the entire text with the following:

The sheeting overlay shall be a pressure-sensitive sheeting meeting the requirements of Subsection 637.2.2.1 or 643.2.12.

Add the following new subsection.

643.2.12 Signs

643.2.12.1 General. Sign layouts shall be in accordance with the FHWA's Manual of Standard Highway Signs, unless otherwise provided on the plans.

The materials and methods of manufacture and assembly of signs shall be in accordance with the requirements for Type II Signs as specified in Section 637, with the following modifications:

(1) A good exterior Grade A-B plywood with a 13 mm minimum thickness will be acceptable as a sign base.

(2) Signs which will have fluorescent orange prismatic sheeting shall also meet the requirements of Subsection 643.2.12.2.

Standard construction signs shall have all messages and borders stenciled directly on the sign background, except as provided in Subsection 643.2.8 for sign overlays.

The sign face material for signs R1-1 (STOP), R1-2 (YIELD), R5-1 (DO NOT ENTER), and R5-1a (or R5-9) (WRONG WAY) shall conform to Subsection 637.2.2.2. All other sign face material shall conform to Subsection 637.2.2.1, except as provided in the contract or except as specified hereinafter for orange work zone traffic control signs.

Retroreflective sheeting on signs shall be kept clean. Scratches, rips and tears in the sheeting shall be corrected promptly by the contractor. Signs with abrasions, asphalt splatter, or concrete slurry on the sign face such that the message or any letters are illegible, shall be corrected or replaced. Signs with noticeable color fading shall be replaced.

The retroreflectance of all signs, except orange work zone traffic control signs, shall be maintained at a level not less than 75 percent of the minimum value required in Subsection 637.2.2.1 for signs with Standard Reflective Sheeting and not less than 50 percent of the minimum value required in Subsection 637.2.2.2 for signs with Type H Reflective Sheeting.

643.2.12.2 Orange Work Zone Traffic Control Signs. The sign face material for orange work zone traffic control signs shall be fluorescent orange prismatic retroreflective sheeting having an initial Coefficient of Retroreflection of not less than 100 cd/1x/m^2 at a 0.2 degree observation angle and a - 4 degree entrance angle, and 64 cd/1x/m^2 at a 0.5 degree observation angle and a - 4 degree entrance angle. The sheeting color shall comply with the following chromaticity coordinates and luminance factor:

	1		2		3		4		Luminance Factor(Y%)	
X	Y	X	Y	X	Y	X	Y		Min.	Max.
0.583	0.416	0.523	0.397	0.560	0.360	0.631	0.369		28	---

The sheeting color and initial Coefficient of Retroreflection shall be verified by independent testing as required by the Department.

The following work zone traffic control signs do not need to have fluorescent orange prismatic sheeting; materials meeting the requirements of Subsection 637.2.2.1 may be used:

a. G20-2a "End Road Work" signs.
b. M4-9/M4-8 series "Detour" signs, and MO5-x/MO6-x arrow plaques used in detour sign assemblies.
c. Special fixed message signs as specified in Subsection 643.2.11 of the Standard Specifications.
d. Orange plaques which supplement or cover a portion of existing green guide signs.

Fluorescent orange prismatic sheeting shall be applied to new plywood bases, new aluminum bases, or reconditioned aluminum bases which have had all previous sheeting materials removed. Existing signs with prismatic sheeting shall not have their messages removed and new messages reapplied to the sign face except as specified for overlays in Subsection 643.2.8.

Signs in the contractor's inventory which have non-fluorescent prismatic sheeting meeting the Coefficient of Retroreflection for fluorescent prismatic sheeting may be used for work under the contract.

The contractor shall not mix the use of signs having fluorescent prismatic sheeting with signs having non-fluorescent prismatic sheeting.

The retroreflectance of all signs with fluorescent or non-fluorescent orange prismatic sheeting shall be maintained at a level not less than 50 cd/1x/m^2 at a 0.2 degree observation angle and - 4.0 degree entrance angle, and 32 cd/1x/m^2 at a 0.5 degree observation angle and - 4.0 degree entrance angle. The retroreflectance of all other orange signs shall be maintained at a level not less than 75 percent of the minimum value required in Subsection 637.2.2.1 for Standard reflective sheeting.

643.3.4 Signs

Add the following at the end as paragraph two:

The height of post-mounted temporary traffic control signs shall be a minimum of

2130 mm from the bottom of the sign to the height of the near edge of pavement or curb, unless otherwise approved by the engineer. The height to the bottom of a secondary sign mounted below another post-mounted sign shall be a minimum of 1820 mm, unless otherwise approved by the engineer.

643.3.5.2 Types A (Low Intensity Flashing) and C (Steady Burn)

Add the following at the end as paragraph twelve:

Type A lights are not required to be installed on signs with fluorescent or non-fluorescent orange prismatic retroreflective sheeting.

643.3.7 Sign Message Overlays

Replace paragraph three with the following:

Non-word messages cannot be a sign overlay, except for the Lane Reduction Transition sign, WO4-2.

643.3.12 Fixed Message Signs

Add the following at the end as paragraph two:

When a fixed message sign is mounted on posts, the height from the bottom of the sign to the height of the near edge of pavement or curb shall be a minimum of 2130 mm, unless otherwise approved by the engineer.

643.5.1 Traffic Control

Replace paragraph one with the following

Traffic Control, measured as provided above, will be paid for at the contract lump sum price, which price shall be full compensation for constructing, assembling, painting, hauling, erecting, re-erecting, maintaining and removing traffic signs, drums, barricades and similar control devices, including arrow boards, unless otherwise provided; for furnishing, placing and maintaining lights and signals, including the fuel or power therefor, unless otherwise provided; for furnishing, applying and removing pavement markings, unless otherwise provided; and for all labor, tools, equipment, services and incidentals necessary to complete the work.

645.2.4 Geotextile Fabric, Type DF (Drainage Filtration)

Replace paragraph one and the associated tables of physical requirements with the following:

The fabric shall comply with the physical requirements of either Schedule A, Schedule B, or Schedule C in accordance with the requirements of the contract documents.

SCHEDULE A

Test	Method	Value (1)
Grab Tensile Strength, N	ASTM D 4632	500 min.
Puncture Strength, N	ASTM D 4833	175 min.
Apparent Breaking Elongation, %	ASTM D 4632	30 min.
Apparent Opening Size, µm	ASTM D 4751	300 max.
Permittivity, S-1	ASTM D 4491	0.70 min.

SCHEDULE B

Test	Method	Value (1)
Grab Tensile Strength, N	ASTM D 4632	800 min.
Puncture Strength, N	ASTM D 4833	300 min.
Apparent Breaking Elongation, %	ASTM D 4632	30 min.
Apparent Opening Size, µm	ASTM D 4751	300 max.
Permittivity, S-1	ASTM D 4491	1.35 min.

SCHEDULE C

Test	Method	Value (1)
Grab Tensile Strength, N	ASTM D 4632	800 min.
Puncture Strength, N	ASTM D 4833	300 min.
Apparent Breaking Elongation, %	ASTM D 4632	15 min.
Apparent Opening Size, µm	ASTM D 4751	600 max.
Permittivity, S-1	ASTM D 4491	1.00 min.

645.2.6 Geotextile Fabric, Type R (Riprap)

Replace the entire text with the following:

The fabric shall comply with the following physical properties:

Test	Method	Value (1)
Grab Tensile Strength, N	ASTM D 4632	900 min.
Puncture Strength, N	ASTM D 4833	350 min.
Apparent Breaking Elongation, %	ASTM D 4632	15 min.
Apparent Opening Size, µm	ASTM D 4751	600 max.
Permittivity, S-1	ASTM D 4491	0.12 min.

645.2.7 Geotextile Fabric, Type HR (Heavy Riprap)

Replace the entire text with the following:

The fabric shall comply with the following physical properties:

Test	Method	Value (1)
Grab Tensile Strength, N	ASTM D 4632	1350 min.
Puncture Strength, N	ASTM D 4833	450 min.

Apparent Breaking Elongation, %	ASTM D 4632	15 min.
Apparent Opening Size, µm	ASTM D 4751	600 max.
Permittivity, S-1	ASTM D 4491	0.40 min.

646.2.3.1 General

Replace paragraph four with the following:

The beads shall be essentially free from surface scratching or scarring and have a minimum of 75 percent true spheres.

646.2.4.4.3 Qualification

Replace the entire text with the following:

The contractor shall provide a material that has demonstrated good performance on Wisconsin D.O.T. projects.

If the epoxy material has not been used previously on a Wisconsin D.O.T. project or is a "new improved" version of an accepted formula, the manufacturer shall submit to the Bureau of Highway Operations two months before the bid date, the following for the proposed material:

a. A list of two or more successful installations, in the United States, at least two years old with at least 8 km of line.
b. A chemical composition report.
c. The manufacturer's application recommendations.

The list of locations in (a) shall include the project identification; length of the project; the contracting agency name; and the name, address, and telephone number of a contact person for each project.

The Bureau of Highway Operations will designate at least 8 km of line on a Wisconsin D.O.T. project for field performance evaluation. The proposed material must meet the Department's minimum retroreflectivity and durability requirements for one year in service. General approval will require further performance evaluation on one additional project

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646.4.2 Applying Painted Markings

Add the following to the end as paragraph three:

The paint shall be applied according to the manufacturer’s recommendation for minimum pavement temperature.

649.2.3 Reflectorized Paint

Replace the entire text with the following:

The paint shall be commercially available solvent-borne or waterborne paint intended for marking traffic lanes on both concrete and asphaltic highways. The paint shall conform to requirements of Subsections 646.2.1 and 646.2.2. Reflectorization of the paint shall be by means of glass beads. The glass beads shall conform to requirements of Subsection 646.2.3. The color of the paint shall be yellow or white, as required on the plans.

649.4 Construction Methods

Add the following to the end as paragraph ten:

When no passing zone temporary pavement marking is required, the contractor shall be responsible for the referencing of the beginning and end of all existing no-passing zones prior to pavement resurfacing which will cover the pavement markings. The contractor shall be responsible for the accurate re-marking of the required temporary no-passing zones.

SCHEDULE OF BID ITEMS ADDED AND RETIRED
BY THE 1998 SUPPLEMENTAL SPECIFICATIONS
U.S. STANDARD MEASURE (EAS VERSION 3)

ADDED BID ITEMS

Item Number	Description		Unit
41101	Asphaltic Surface		Ton
41102	Asphaltic Surface, Patching		Ton
41103	Asphaltic Surface, Detours		Ton
41104	Asphaltic Surface, Safety Islands		Ton
41105	Asphaltic Surface, Driveways and Field Entrances		Ton
41106	Asphaltic Surface, Temporary		Ton
41526	Concrete Pavement, 6 1/2-Inch		S.Y.
41527	Concrete Pavement, 7 1/2-Inch		S.Y.
41528	Concrete Pavement, 8 1/2-Inch		S.Y.
41529	Concrete Pavement, 9 1/2-Inch		S.Y.
41530	Concrete Pavement, 10 1/2-Inch		S.Y.
41531	Concrete Pavement, 11 1/2-Inch		S.Y.
41538	H.E.S. Concrete Pavement, 8 1/2-Inch		S.Y.
41539	H.E.S. Concrete Pavement, 9 1/2-Inch		S.Y.
41540	H.E.S. Concrete Pavement, 10 1/2-Inch		S.Y.
41541	H.E.S. Concrete Pavement, 11 1/2-Inch		S.Y.
50265	Protective Surface Treatment		S.Y.
50903	Preparation, Decks, Type 1		S.Y.
50904	Preparation, Decks, Type 2		S.Y.
62002	Concrete Median Blunt Nose		S.F.
62003	Concrete Median Sloped Nose		S.F.
61150	Manhole Covers, Type J-Special		Each
61172	Inlet Covers, Type HM-GJ		Each
61173	Inlet Covers, Type HM-GJ-S		Each
61434	Steel Plate Beam Guard, Slotted Rail Terminal		Each
61435	Steel Plate Beam Guard, Energy Absorbing Terminal		Each
62826	Erosion Mat, Delivered, Class I, Type Urban	S.Y.	
62827	Erosion Mat, Installed, Class I, Type Urban	S.Y.	
65308	Pull Boxes, Steel, 12x30-Inch	Each	
65309	Pull Boxes, Steel, 18x30-Inch	Each	
65310	Pull Boxes, Steel, 24x42-Inch	Each	
65311	Pull Boxes, Steel, 24x48-Inch	Each	
65410	Concrete Bases, Type 6		Each
65719	Traffic Signal Standards, Steel, 3.5-Foot		Each
65724	Traffic Signal Standards, Steel, 10-Foot		Each
65729	Traffic Signal Standards, Aluminum, 3.5-Foot		Each
65734	Traffic Signal Standards, Aluminum, 10-Foot		Each

RETIRED BID ITEMS

Item Number	Description	Unit
30421	Asphaltic Pavement, Base Course	C.Y.
30422	Asphaltic Pavement, Base Course	Ton
50230	Protective Surface Treatment	Gal.
50901	Preparation, Decks	S.Y.

SCHEDULE OF BID ITEMS ADDED AND RETIRED
BY THE 1998 SUPPLEMENTAL SPECIFICATIONS
SI METRIC (EAS VERSION 4)

ADDED BID ITEMS

Item Number	Description		Unit
41101	Asphaltic Surface		Mg
41102	Asphaltic Surface, Patching		Mg
41103	Asphaltic Surface, Detours		Mg
41104	Asphaltic Surface, Safety Islands		Mg
41105	Asphaltic Surface, Driveways and Field Entrances		Mg
41106	Asphaltic Surface, Temporary		Mg
41526	Concrete Pavement, 165 mm		m2
41527	Concrete Pavement, 190 mm		m2
41528	Concrete Pavement, 215 mm		m2
41529	Concrete Pavement, 240 mm		m2
41530	Concrete Pavement, 265 mm		m2
41531	Concrete Pavement, 290 mm		m2
41538	H.E.S. Concrete Pavement, 215 mm	m2	
41539	H.E.S. Concrete Pavement, 240 mm	m2	
41540	H.E.S. Concrete Pavement, 265 mm	m2	
41541	H.E.S. Concrete Pavement, 290 mm	m2	
50265	Protective Surface Treatment		m2
50903	Preparation, Decks, Type 1		m2
50904	Preparation, Decks, Type 2		m2
62002	Concrete Median Blunt Nose		m2
62003	Concrete Median Sloped Nose		m2
61150	Manhole Covers, Type J-Special		Each
61172	Inlet Covers, Type HM-GJ		Each
61173	Inlet Covers, Type HM-GJ-S		Each
61434	Steel Plate Beam Guard, Slotted Rail Terminal		Each
61435	Steel Plate Beam Guard, Energy Absorbing Terminal		Each
62826	Erosion Mat, Delivered, Class I, Type Urban	m2	
62827	Erosion Mat, Installed, Class I, Type Urban	m2	
65308	Pull Boxes, Steel, 300 x 750 mm		Each
65309	Pull Boxes, Steel, 450 x 750 mm		Each
65310	Pull Boxes, Steel, 24x42-Inch	Each	
65311	Pull Boxes, Steel, 24x48-Inch	Each	
65410	Concrete Bases, Type 6		Each
65719	Traffic Signal Standards, Steel, 1.1 m		Each
65724	Traffic Signal Standards, Steel, 3.0 m		Each
65729	Traffic Signal Standards, Aluminum, 1.1 m		Each
65734	Traffic Signal Standards, Aluminum, 3.0 m		Each

RETIRED BID ITEMS

Item Number	Description	Unit
30421	Asphaltic Pavement, Base Course	m3
30422	Asphaltic Pavement, Base Course	Mg
50230	Protective Surface Treatment	L
50901	Preparation, Decks	m2

ERRATA SHEET

1998 STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION

Conversion Table (page 751):

Under the heading "Volume", change "milliliter" to "millimeter".